Leaping the Hurdles and Navigating the Maze

How to get funding for population – related research from the National Institute of Child Health and Human Development (NICHD)

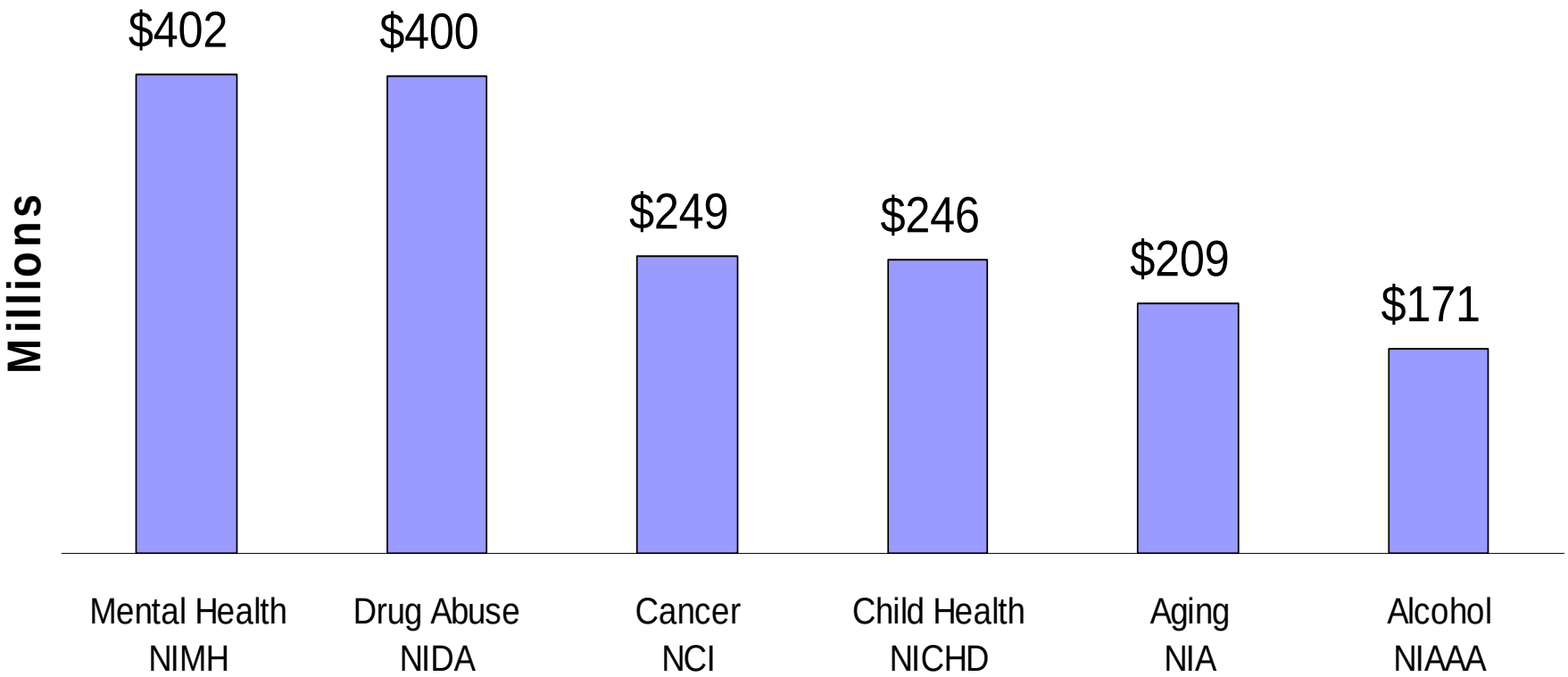
September 2005

National Institutes of Health (NIH) Overview

- The mission of the NIH is to uncover new knowledge that will lead to better health for everyone
- 27 components (institutes and centers)
- $27.3 billion in funding in 2003
- 4/5 goes to grants and contracts supporting extramural research

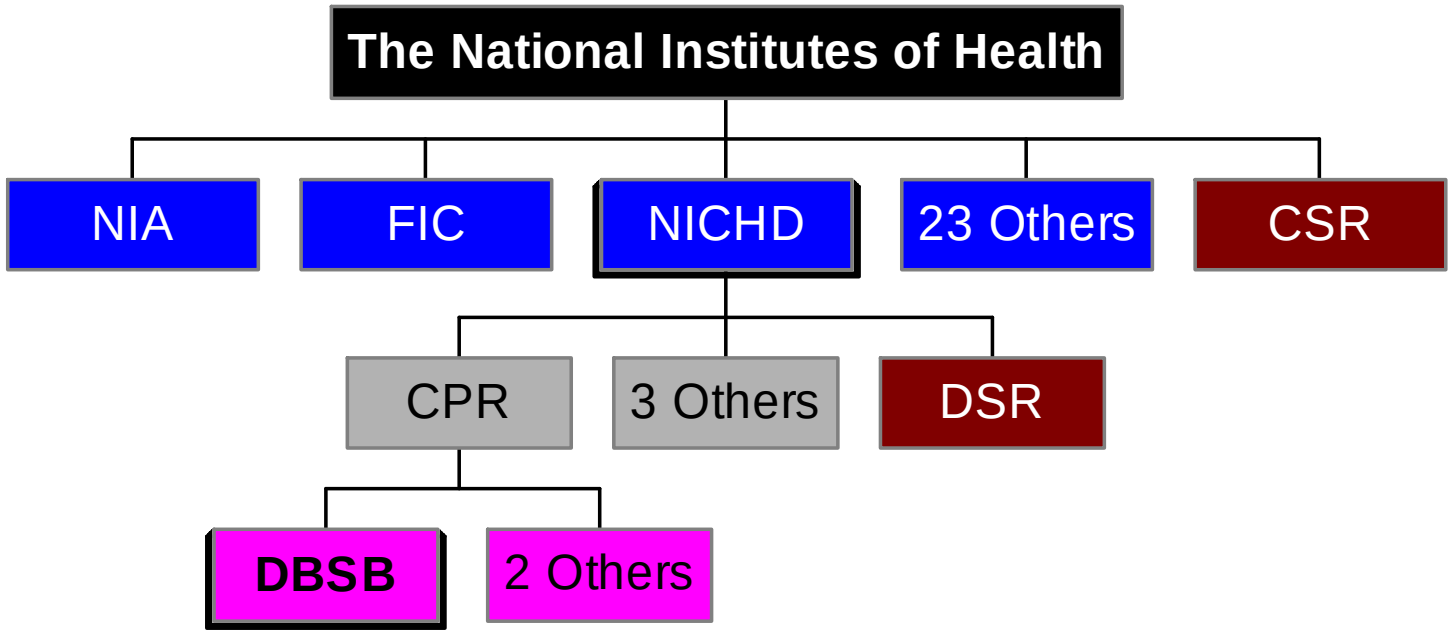
NIH funding for behavioral and social science research (2002)

$2.3 BILLION



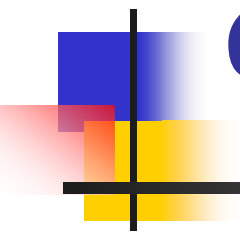
NICHD

- Largest single funder of behavioral and social research on population
- Most funding for this research is through the Demographic and Behavioral Sciences Branch (DBSB)
  - $87.4 million grant funding in FY02



NICHD: Nat'l Institute of Child Health & Human Development
NIA: Nat' l Institute on Aging
FIC: Fogarty International Center
CSR: Center for Scientific Review
DSR: Division of Scientific Review
DBSB: Demographic & Behavioral Sciences Branch

Funding Opportunities and Mechanisms at the NICHD



DBSB *always* interested in funding research in:

- Fertility and contraception
- Mortality, morbidity and health
- Migration and population distribution
- Immigration and immigrants
- Family and household structure and processes
- Marriage and cohabitation
- Demographic methods
- Economic demography
- Behavioral research on HIV/STDs
- Population and environment
- Race and ethnicity
- Child care
- . . . and more

What kinds of funding can I get?

- Training and development
- Research support

Grants for junior investigators: Training and development

- F31 Predoctoral Fellowships
  - Minority students
  - Students with disabilities
- F32 Postdoctoral Fellowships
- K01 Mentored Population Research Scientist Development Award

Grants for junior (& other) investigators: Research

- R01 Research Project Grant
- R03 NIH Small Research Grant Program
- R21 NIH Exploratory/Developmental Research Grant
- R15 Academic Research Enhancement Awards (AREA)
- S Research Supplements to Promote Diversity in Health-Related Research (on existing R01s & other grants)

R03 NIH Small Research Grant

- Limited funding/short period of time
- Examples:
  - Pilot/feasibility studies
  - Secondary analysis of existing data
  - Small, self-contained research projects
  - Developing research new methodology or technology

R21 NIH Exploratory/ Developmental Research Grant

- New exploratory and developmental research projects
- Examples:
  - Feasibility studies
  - Unique/innovative use of an existing methodology to explore a new scientific area
  - High risk/high payoff

R01/R21/R03 (at NICHD)

Limits	R01	R21	R03
Time	5 years	2 years	2 years
Funding cap	$500k/yr	$200k/yr $275k total	$50k/yr
Revisions	2	2	2
Page	25	15	10
Review	CSR NIH	CSR NIH	DSR NICHD
Renewable?	Yes	No	No

R15 Academic Research Enhancement Awards

- Individual research projects conducted by faculty
- Involving undergraduate students
- At institutions without major recipiency of NIH research grant funds.

Special funding initiatives

Most important thing to remember:

YOU DON'T NEED A SPECIAL FUNDING INTITIATIVE (RFA, PA) TO APPLY FOR FUNDING

I'll remind you again in a few minutes

Special funding initiatives

- RFA: Request for Applications
- PA: Program Announcement
- How NIH asks researchers to consider certain topics or areas
- Also how NIH notifies researchers that funding mechanisms (e.g., R03s, R21s, K01s) are available
- Notices give additional information about RFAs and PAs

RFA versus PA:

	RFA	PA
NICHD sets aside funds for projects?	Yes	Usually not
Special application deadlines?	Yes	Usually not
How long active?	Until deadline	3 years
Special review panel?	Yes	Usually not

Examples of RFAs

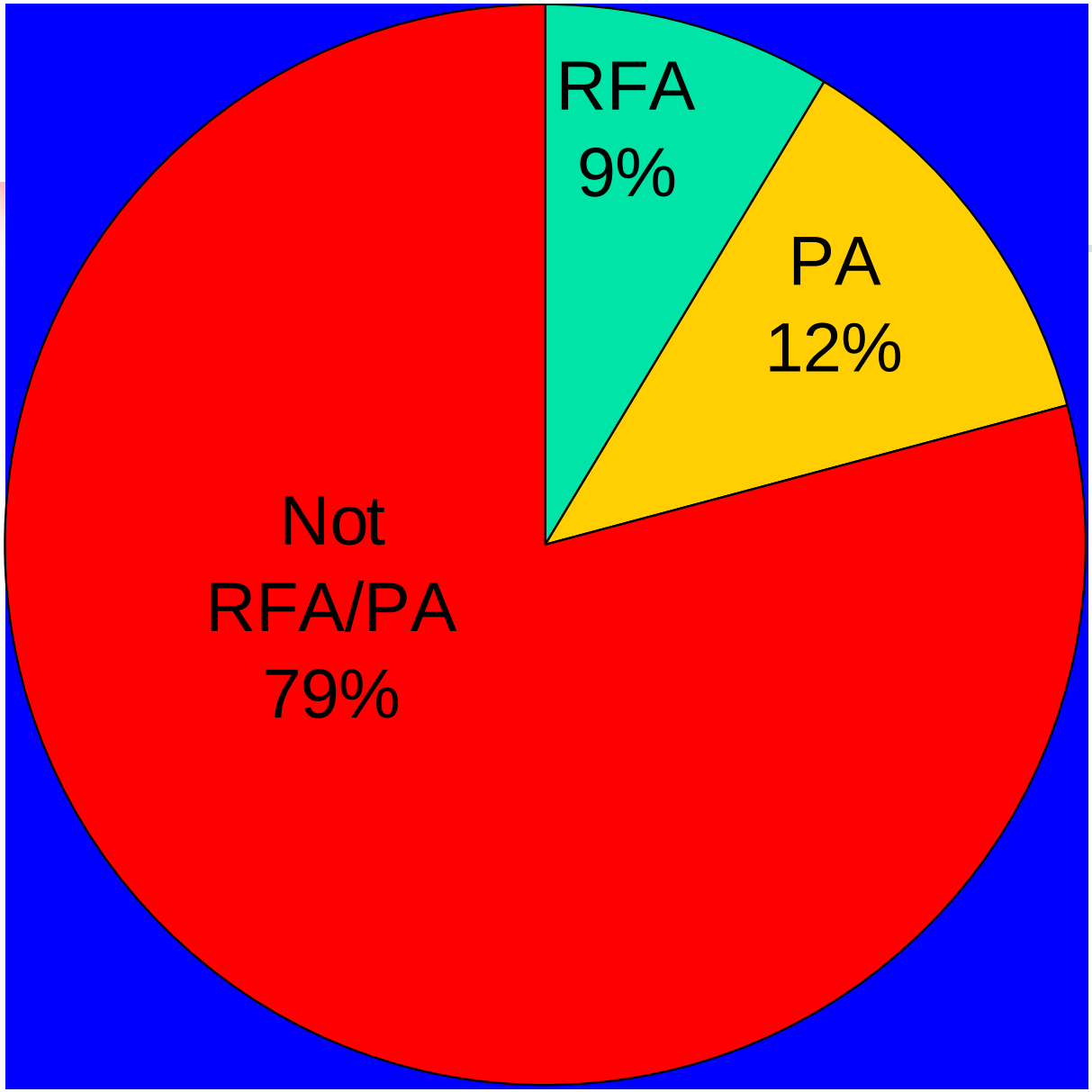
- Mind-Body/Interactions and Health
- Development of Community Child Health Research
- Population Research Infrastructure Program
- Health, Environment and Economic Development (HEED)

Examples of PAs: Research topics

- Social & Demographic Studies of Race & Ethnicity in the United States
- Social & cultural dimensions of health
- Methodology & measurement in the behavioral & social sciences
- Population movement
- The science & ecology of early development (SEED)

Examples of PAs: Funding mechanisms

- NIH Small Research Grant Program (R03)
- NIH Exploratory/Developmental Research Grant Award (R21)
- Mentored Research Scientist Development Award (K01)



Remember:

Relatively few research grants result from RFAs & PAs

DBSB R01s, FY2000

4 things to know about AIDS research funded through DBSB:

- Different application deadlines
- Different study sections
- Money comes from different funding streams
- For more information contact Susan Newcomer at:

(301) 435-6981 or

sn19y@nih.gov

Examples of NICHD/DBSB announcements-HIV related

- Research on HIV/STD prevention messages
- Research on social networks and HIV risk prevention
- Demographic research on sexual behaviors related to HIV

The Process: Idea to Application

- A good idea
- Before you apply
- Rules for writing a grant application
- Other things to know and do

The starting point . . .

Have a good idea

- No amount of grantsmanship can disguise a weak idea . . .
- But poor grantsmanship can kill a good idea

What is a good idea?

A good idea:

- Addresses a significant question
- Brings something new to the table
- Is focused
- Is feasible

Before you apply

- Look at the funder's website
- Talk with program staff about research ideas & funding mechanisms
- Read the instructions in application (and PA/RFA, if applicable)
- Know the deadlines

Learn from what others have done

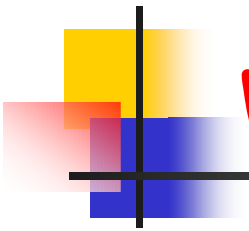
- Get copies of
  - Successful applications
  - Successful summary statements
  - Unsuccessful summary statements

"Summary statement"= Critique from review group = "Pink sheet"

Find a guide

- Work with someone who knows the process
  - Another researcher, outside NICHD
- And way, way before you apply: Pick a mentor who will help you launch your career

Now sit down and start writing



- Here are a few pointers

Know your strengths & weaknesses

- Write about what you know
  - Don't use your first application to completely change research directions
- Never change research directions to respond to an RFA or PA
- Don't promise more than you can deliver

Develop a unified proposal with a sharp focus

1. Theory
2. Hypotheses
3. Data
4. Research and analysis plans

should all be carefully integrated and logically related

Be persuasive

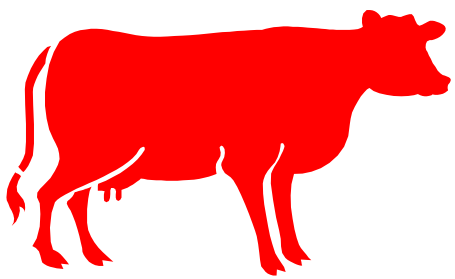
- Sell your ideas early in the application
- Crisply state your specific aims
- Explain yourself–Don't assume reviewers will know what you mean
- Tell reviewers:
  - What you want to do
  - Why is it important to do this research

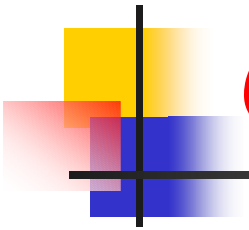
Take your time

- Don't rush in an underdeveloped application to meet a deadline
- Think through and address
  - All aspects of your research plan
  - All possible objections to it
- Leave time for trusted colleagues to critique your application – several times!

Don't irritate the reviewers

- Follow the directions
- Don't be sloppy
- Don't use teeny, tiny type
- Don't include an appendix as large as a cow





Other things to know and do

Know the deadlines

- At NIH, for R01s* and many other mechanisms:
  - February 1, June 1, October 1
  - Revisions may have different dates
- AIDS applications 3 months later
- Check application guidelines for your situation

*Unless RFA

Most common pitfall for new applicants

- Great ambitions … underdeveloped plans

Another common problem

- Failure to read the instructions
  - READ the application form
  - READ the RFA, PA, or Notice, if applicable
  - Specific instructions in an RFA, PA, or Notice supercede instructions in application form

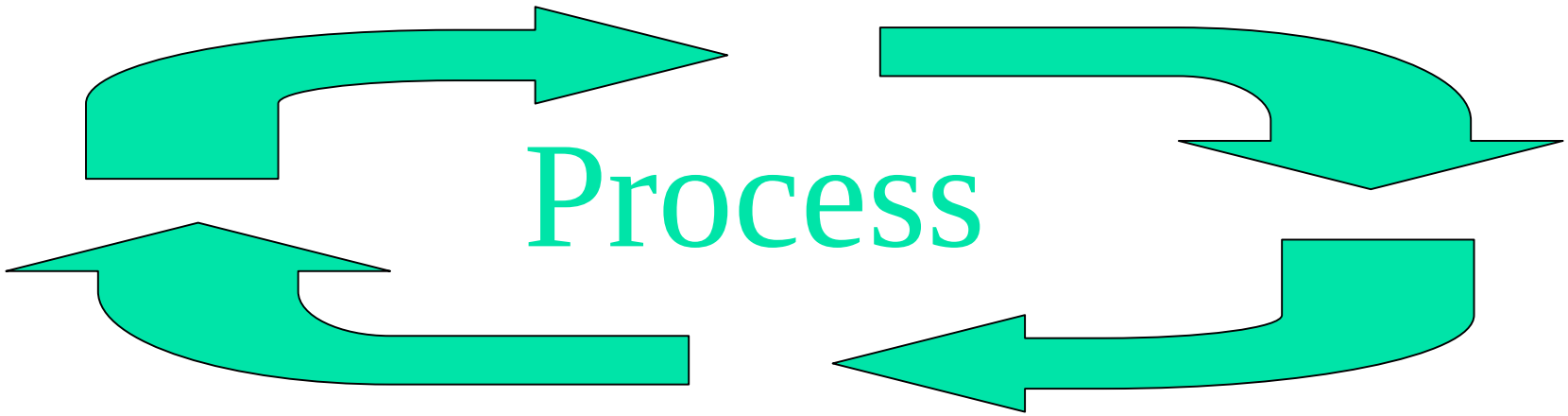
Myths about applying

- It's better to have an established researcher as PI
- Shorter project periods are more likely to be funded
- It's a good idea to underestimate the project's cost
- Don't apply unless there is a PA or RFA

Why you should apply for NICHD grant funding:

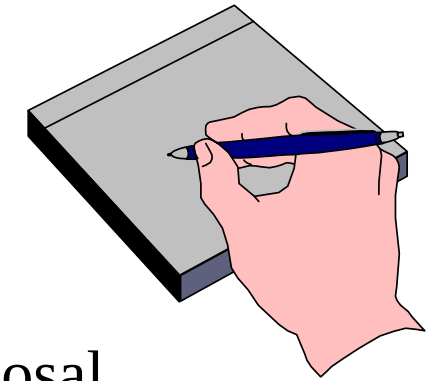
- It's hard work to get a grant, but a GREAT way to support your research.
  - You control the science
  - Grant has few administrative requirements
- You get great input from wise people about your research
- Prestige of the NICHD/NIH reputation will be associated with your research

Application to funding: How does NICHD decide what to fund?

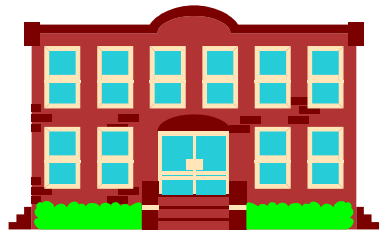


Brilliant idea

Brilliant proposal

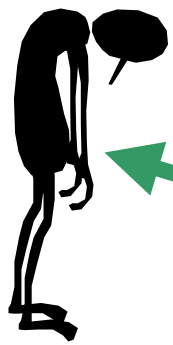


Institution submits

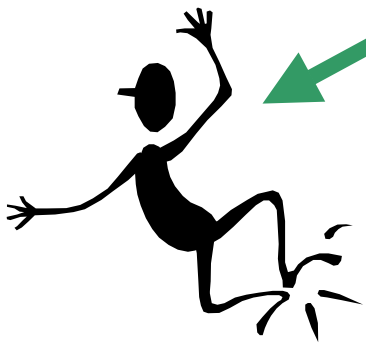


Revise proposal

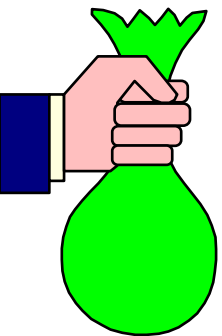
Join French Foreign Legion



NIH reviews

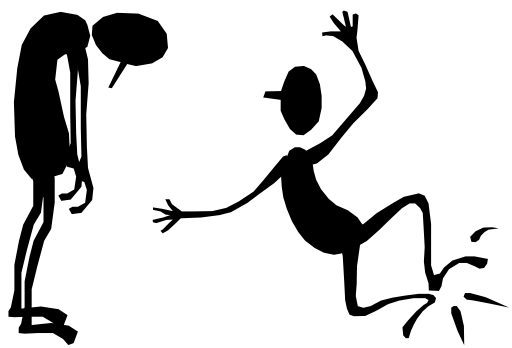


Get funding



Evaluation of scientific merit

Your proposal comes in and gets reviewed



Evaluation of scientific merit separate from funding decision

- Evaluation of scientific merit:
  - Run by *scientific review administrators (SRAs)*
- Decision whether to fund:
  - Program staff
  - Advisory council
  - Institute director

Who reviews NIH proposals?

- A "study section"—there are dozens
- Which study section depends on:
  - Scientific content and methodology
  - Mechanism (e.g., R01, R03, F32, K01 . . .)
  - Which Institute proposal goes to
  - Whether responding to RFA

What's a "study section"

- Top scientists with relevant expertise from *outside NIH*
- Special scientific review administrators, not program staff, put together
- Most applications go to one of the *standing committees* that meets three times a year
  - You can look up the rosters to see who is on

Five review criteria

- Significance
- Innovation
- Approach*
- Investigator*
- Environment*

*What R01 reviewers are told about evaluating new researchers:

- Approach: More emphasis on demonstrating feasibility of techniques/approaches than on preliminary results
- Investigator: More emphasis on training and research potential than on number of publications
- Environment: Evidence of institutional commitment—resources, time to perform research

Basics of NIH Review

- Priority score assigned
  - Numerical rating—Scientific merit of proposed research relative to "state of the science"
  - 100-150: Outstanding
  - 151-200: Excellent
  - 201-250: Very good
  - 251-300: Good
  - 300-500: Unscored (usually)

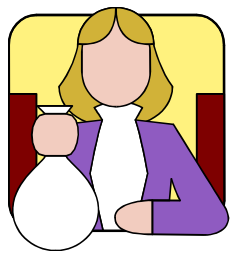
What applicant gets after review

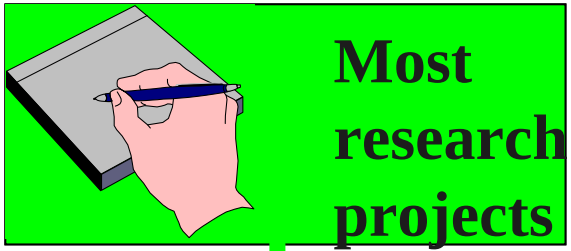
- A score
- Detailed written comments from at least 2 reviewers
  - Even if your application is "unscored"
- Scored applications: Written summary of discussion from study section meeting
  - SRA prepares

Cover letter with application

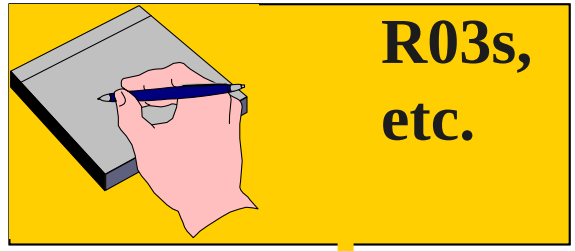
- You can request CSR to:
  - Assign your application to a particular Institute to consider funding (e.g., NICHD, NIA, FIC)
    - Mention name of program official you have talked with
  - Assign your application to a particular study section to review scientific merit

The funding decision





Most research projects



R03s, etc.

DBSB reviews proposal & summary statement, makes funding recommendation

Review by Advisory Council

NICHD Director makes final funding decision

What if I don't get funded?

- *TRY AGAIN!*
- Nearly all funded investigators have had proposals blown out of the water . . . But they applied again
- Even applications that are "unscored" can receive funding if appropriately revised
- Talk to program staff

What Program Staff Can Do for You

What program staff can do for you

- Help you before you submit your application
- Let you know what your scores are
- Let you know what happened to your proposal during study section
- Help you interpret your summary statement

What program staff can do for you

- For scientific reasons, arrange funding for grants that are a little below the funding line (currently exceedingly rare)
- For scientific reasons, recommend adjusting grants' budgets (also rare)

What program staff cannot do

- Serve on the external review panel
- Run the external review panel
- Choose the external reviewers
- Assign your proposal to a particular review panel